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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/378,666 08/20/99 WATSON

D 60046/JPW/JH

EXAMINER

MMC2/1004

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NGUYEN, S	
ART UNIT	PAPER NUMBER

2877

DATE MAILED:

10/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/378,666

Applicant(s)

WATSON ET AL.

Examiner

Sang Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/20/99 & Priority Paper on 11/12/99.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Limitation not Considered

With respect to claim 1 in lines 2, 3, 4, and 8; claim 2 in line 3; and claim 3 in line 2. It has been held that the recitation that an element is “**adapted to**” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re hutchison*, 69 USPQ 138.

Drawings

1. The drawings filed on 08/20/99 are objected by the draftsman as indicated on attached PTO-948. Correction is required.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**a reading taken**” in claims 16, 17, and 18; and the “**a directional component**” in claims 17-18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Applicant is required to submit a proposed drawing correction in response to this Office action. However, correction of the note defect can be deferred until the application is allowed by the Examiner.

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Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and **generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words**. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

With respect to the present abstract, the abstract should be limited to a single paragraph on a separate sheet.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. Claim 1, 12, and 14 are objected to because of the following informalities:

Claim 1 in line 6, the "**a** particle size distribution" should be changed to **--the** particle size distribution--.

Claim 12 in line 4, the "to the" should be canceled . Appropriate correction is required.

Claim 14 in line 5, the "**a** particle size distribution" should be changed to **--the** particle size distribution--.

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These are some example, applicant is required to correct all of the minor informalities such as typos and grammars.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 14 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

* Claim 14 recites the limitation "the amount of light scattered" in line 3 and "the measurement zone" in line 6. There is insufficient antecedent basis for this limitation in the claim.

* Claims 16-18 is indefinite. What does applicant mean "a reading"?

* Claims 17-18, the "a detection means" is unclear whether it is "first detection means" or "second detection means". Applicant should be clarified the limitation.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 4-6, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Igushi et al (U.S. Patent No. 5,185,641)

Regarding claims 1 and 14; Igushi et al teaches that a particle size distribution analysis apparatus comprising a sample measurement zone or a sample cell (21 of figure 1) contained a sample of particles (col.5 lines 20-21), a light emitting means (23 of figure 1) provided a light incident or a single wavelength light (M of figure 1) upon the measurement zone (21 of figure 1), and at least a first detection means (26a-26n of figure 1) measured light levels at particular scattering angles (figure 1 and col.6 lines 42-46) and output signals to a computation means (37,39,40 of figure 1) enabling a particle size distribution of particles contained within the sample to be determined, wherein the computation means (37,39,40) is calculated the particle size distribution taking into account reflections by the measurement zone of light scattered off the particles (col.6 lines 58-68 and col.7 lines 1-17). See figures 1-8.

Regarding claims 4-6; Igushi et al discloses the first detection means comprises a large angle detector, wherein the large angle detector is situated substantially in the range 90 degrees to 0 degree from the axis of a beam of light emitted.

Regarding claim 11, it is inherent in Igushi et al that the angle at the second detection means is inclined relative to a beam of the light emitted from the light emitting means is equal to

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180 degrees minus (-) the angle at the first detection means is inclined relative to the beam of light.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-3, 7-10, 12-13, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igushi et al (U.S. Patent No. 5,185,641).

Regarding claims 2-3, 7-10 and 15-18; Igushi et al discloses a second detection means (26a, 26b of figure 1) is a back scatter detector (col. 8 lines 26-28) wherein the back scattered detector (26a, 26b) is situated substantially at an obtuse angle in the range 90 degrees to 180 degrees (figure 1) from the axis of a beam of light emitted (M of figure 1). Igushi et al discloses the claimed invention except for the computation means for using to modify readings taken from the first detection means based upon reading taken from the second detection means to take in to account reflections or the computation means for using to modify readings taken from the second detection means based upon reading taken from the first detection means to take in to account reflections. It would have been an obvious matter of design choice to include in Igushi et al the computation means for using to modify readings taken from the first detection means based upon

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reading taken from the second detection means to take in to account reflections or from the second detection means based upon reading taken from the first detection means, since applicant has not disclosed that these limitations solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with figures 1-5 of Igushi et al for the purpose of measuring accurately data of particle size distribution is readings taken from the each of phtosensors or detectors and low cost system.

Regarding claim 12-13 and 19-21; Igushi et al discloses a plurality of the first and the second detection means are inclined symmetrically relative to the measurement zone. See figures 1 and 5.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kitamura et al (5,428,443) discloses laser diffraction type particle size distribution and apparatus; Tatsumo (4,595,291) discloses particle diameter measuring device; Niwa (JP 05034259) discloses device for measuring panicle size distribution; or Sakata et al (JP 08178830) discloses detector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number is (703) 308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703) 308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 or 7724.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Nguyen/ sn SN

September 17, 2000


Frank G. Font
Supervisory Patent Examiner
Technology Center 2800